



Educational Topic

Computer Specialist

Related Job Titles:

Systems programmer, applications programmer, computer programmer, systems administrator

Job Description:

Computer specialists write, test and manage computer programs (detailed instructions for computers). They break down each computer task into a series of steps the computer can follow. They then use a computer language to write these instructions. After writing the program, they test it to make sure the computer follows the steps correctly and they fix any problems they find. Computer programmers work in offices and spend most of their time on the computer.

Interests / Abilities:

- Do you enjoy working with math and technology?
- Are you good at reasoning and logic?
- Do you pay close attention to details?
- Do you keep working at a problem until you find a solution?
- Do you work well under pressure?
- Are you imaginative and creative?
- Do you express yourself well when speaking to others?

Suggested School Subjects / Courses:

- Math
- Science (physics)
- Computer programming

Education / Training Needed:

The minimum education required for this position is a bachelor's degree in computer science, information science, mathematics, engineering, physical science or a similar subject from an accredited college or university. It is helpful to have experience with computers from internships or summer jobs. Since computer science changes quickly, all computer programmers must keep their skills up-to-date by seeking training throughout their career.

Areas of expertise:

- *Applications programming*: write software to handle specific jobs in an organization or business
- *Systems programming*: manage the use of computer systems software so that communication on a network works smoothly

Additional Resources:

- **NASA Jobs**
<http://nasajobs.nasa.gov>
- Order NASA career videos such as "Journey into Cyberspace," "Space for Women" or "Where Dreams Come True" from NASA CORE.
<http://core.nasa.gov>
- **Association for Computing (ACM)**
<http://www.acm.org>
- **IEEE Computer Society**
<http://www.computer.org>
- **Institute for Certification of Computing Professionals (ICCP)**
<http://www.iccp.org>
- **Robotics Education**
<http://robotics.arc.nasa.gov>
- **Jobs with the Federal Government**
<http://www.usajobs.opm.gov>
- **Student Educational Employment Programs**
http://nasajobs.nasa.gov/stud_opps/employment/index.htm
- **NASA Jobs**
<http://nasajobs.nasa.gov/>
- **NASA Summer High School Apprenticeship Research Program (SHARP)**
<http://www.mtsibase.com/sharp/>

What can I do right now?

- Read magazines like *MacWorld*, *Byte*, *PC World*.
- Join a computer club.
- Take as many math and computer classes as you can.
- Visit Astro-Venture regularly to participate in chats and activities.
<http://astroventure.arc.nasa.gov>
- Call the American Association of Science and Technology Centers for information on science museums in your area that you might visit.
(202) 783-7200
- Participate in science fair projects.

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- Please take a moment to evaluate this product at:
 - http://ehb2.gsfc.nasa.gov/edcats/educational_topic
 - Your evaluation and suggestions are vital to continually improving NASA educational materials.
 - Thank you.
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<http://quest.nasa.gov/people/index.html>

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